



Internal Audit Report

Superior Court
September 2001



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September 24, 2001

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We have completed our FY 2001 review of the Maricopa County Superior Court (SC). The audit was performed in accordance with the annual audit plan that was approved by the Board of Supervisors.

The highlights of this report include the following:

- Legislative changes could eliminate or reduce the \$1.2 million the County pays annually to purchase courtroom transcripts.
- Creation of Juror Donation Program could increase the County General Fund by up to \$700,000 annually.
- Full-cost billing of Jury Commission expenses to valley cities would increase General Fund revenues by \$40,000 to \$70,000 each year.

Attached are the report summary, detailed findings, recommendations, and SC management's response. We have reviewed this information with SC management and appreciate their excellent cooperation. If you have questions, or wish to discuss items presented in this report, please contact Joe Seratte at 506-6092 or Sandy Chockey at 506-1006.

Sincerely,

A handwritten signature in cursive script that reads "Ross L. Tate".

Ross L. Tate
County Auditor

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Executive Summary

Effective Operations Management (Page 7)

The Maricopa County Superior Court (SC) Administration effectively manages court operations in the areas of judicial procurement, judges' compensation, grants management and funds allocation, and jury revenue and expenditure cycles.

Court Reporter Transcript Fees (Page 8)

The County pays court reporters, including those employed by SC, approximately \$1.2 million per year for transcripts of courtroom proceedings. At least one SC court reporter's annual transcript income and salary exceeded \$100,000 and SC has paid over \$20,000 for a single transcript. Changes to ARS requirements related to transcripts could significantly reduce County costs. The County should seek legislative authority to make courtroom transcripts property of the County or appropriate court. SC should strengthen controls over the process for making personal transcript copies on court equipment.

Donation of Juror Fees (Page 11)

SC paid Superior Court jurors \$1,971,412 in FY 2000 for mileage reimbursement and daily fees. Benchmarking with other counties indicates that up to 36% of jurors will donate their fees back to their County if given the opportunity. A County Jury Donation Program could generate as much as \$700,000 each year for the General Fund or other Special Revenue Fund. The SC Jury Commission should initiate a Board of Supervisors agenda item calling for the creation of a Maricopa County Jury Donation Program, as soon as possible.

Increased Revenue – Municipal Jury Summons (Page 13)

The SC Jury Commission provides jury summons services to local municipalities for a fee. Under the terms of IGAs first executed in FY 1995, cities reimburse the County on a cost-per-summons basis of one dollar. SC records show actual costs since FY 1995 have ranged from \$1.17 to \$1.31 per summons. If cities are billed for actual costs, County revenue should increase by \$40,000 to \$70,000 annually. In the future, the SC Jury Commission should bill cities for full actual costs.

Stale Dated Jury Warrants (Page 15)

Approximately \$150,000 of Miscellaneous Revenue can be immediately transferred for use in the General Fund from Fund 714 – Jury Payroll Clearing. Per A.R.S. 11-644 A-C, County warrants not presented for payment for one year are deemed to have been paid. These monies can then be transferred to the General Fund. Stale-dated jury warrants have not been transferred from Fund 714 to the General Fund since the inception of the law in September 1996. Transfer of these funds would increase the General Fund balance by over \$150,000. The Department of Finance (DOF) should reconcile Fund 714 and transfer appropriate balances to the General Fund.

Information Technology Management (Page 17)

Judicial Information Services (JIS) has formed an Information Technology (IT) Steering Committee and is developing a Project Management Methodology document. However, the Steering Committee has not met to discuss the JIS project plan for moving its existing Automated Court System (ACS) application from the mainframe environment to a web-enabled NT environment. An IT Steering Committee will assist in providing project direction and prioritization which may prevent cost overruns and inefficiencies. JIS' IT Steering Committee should review and approve all IT project plans and JIS should complete its Project Management Methodology document.

Security Weaknesses (Page 18)

Several control weaknesses were identified relating to security administration within JIS. Security administration establishes a framework for protecting information and information technology systems by assuring operation continuity, integrity, and confidentiality. Without adequate security administration, systems may be compromised. JIS should strengthen its security administration controls.

Operating Systems Weaknesses (Page 22)

The Bull mainframe logical security settings include parameters that are not considered best practice. Additionally, a formalized (written) procedure has not been developed for approval and testing of new operating systems, operating system upgrades, or operating system patches. JIS should implement proper controls to reduce the risk that the integrity of the information processed on the department's systems will be compromised.

Segregation of Duties (Page 21)

Application developers have access to the production environment, which increases the risk of improper and undocumented changes to JIS systems. Inadequately segregated duties increase the risk that erroneous or fraudulent transactions may be processed or that improper program changes can be implemented. JIS should remove or strictly limit developer access to JIS production environments.

Business Continuity (Page 22)

JIS has not developed a formal disaster recovery plan. Additionally, the data center sprinkler system is not dry-charged and backup tapes stored on-site are not protected from water damage. JIS does not have assurance that systems can be recovered in a timely manner, in the event of a fire or disaster, and may experience business interruption. JIS should develop a formal disaster recovery plan and consider alternatives for its current fire extinguishing system.

Introduction

Background

The Superior Court of Arizona in Maricopa County (SC) was founded by authority granted by Article six of the Arizona State Constitution. The Superior Court's jurisdiction and operations are established under Arizona Revised Statutes (ARS). SC is a large, urban trial court that serves over three million people living and working in Maricopa County. The court conducts business at three sites including the downtown Phoenix complex, Southeast facility and Juvenile Court Center.

Mission

The mission of the Superior Court of Arizona in Maricopa County is to provide access to a public forum for dispute resolution and court services to the public so they can realize timely, fair, and individualized justice.

Organization

SC employs 90 full-time Superior Court Judges along with several pro bono pro tempore judges. Superior Court also employs 30 Commissioners/Hearing Officers who hear matters of lesser judicial impact. The judicial officers are organized into the following Divisions:

- Civil
- Family
- Criminal
- Juvenile
- Tax
- Probate/Mental Health
- Special Assignment
- Southeast Branch (Mesa/Gilbert Center)

SC was authorized 910 full-time equivalents (FTE) for FY 2001. Over half are assigned to direct courtroom proceedings, such as:

• Judges	90
• Commissioners/Hearing Officers	30
• Court Reporters	76
• Bailiffs	102
• <u>Judicial Assistants</u>	<u>114</u>
• TOTAL	412

The remaining FTEs perform functions that support courtroom proceedings and are organized under the Superior Court Administrator. These functions include Human Resources, Information Systems, Security and Facility Management, and Budget and Accounting. In addition, the Jury Commission operates under the direction of Superior Court Administration.

Scope and Methodology

Our audit objectives were to determine if:

- The State and the County compensates Superior Court judges correctly according to ARS and legislative regulations
- The Jury Commission can more effectively serve the community by developing a program that allows jurors to donate their fees and reimbursements
- The Court Reporter function can more efficiently meet the needs of the County and the public through enhancements or changes to the transcription process
- SC receives all possible revenue streams identified in ARS and if funds received are accurately recorded and appropriately utilized
- The Jury Commission function employs effective controls over the revenue and expenditure cycle including billing, collections, processing, and accounting
- SC procedures include effective controls over disbursements for courtroom services and transcripts
- SC effectively follows the Judicial Procurement Code when developing and administering contracts with outside vendors
- Effective controls are maintained over SC information systems.

This audit was performed in accordance with Government Auditing Standards.

Department-Reported Accomplishments

The following accomplishments were provided to the Internal Audit Department by SC management for inclusion in this report.

- **Regional Court Centers for Felony Matters:** Preliminary Hearing and Arraignment are held on the same day. Resulting in a savings of ten jail days per in-custody defendant and \$4,500,000 per year. The Superior Court completed the Downtown Center in August 2001 and anticipates that Northwest and Southeast Centers will be completed by end of 2001.
- **Early Disposition Court (EDC):** EDC targets low level drug and welfare fraud cases. During FY 2001, over 6,000 felony cases were filed and disposed in EDC (22% of total felonies). In FY 2001, the number of days from arraignment to termination for EDC cases averaged 18 days, compared to 84 days for other felonies.
- **Initial Appearance Court and Pretrial Services Automation.** Automated case tracking systems for Initial Appearance Court and Pretrial Services were implemented in FY 2001, resulting in improved statistical and case tracking, and elimination and duplication of staff tasks.
- **Implementation of Differentiated Criminal Case Management** has reduced the active pending case inventory for FY 2001 by 1000 cases. Examples include: 1) A small group of rotating Civil Department judges act in an “overflow” capacity to try criminal cases from case transfer before commencing other civil cases; and, 2) A Motion to Continue panel was established to ensure trial certainty and case movement. Although most continuances are granted, 40% were for less than 20 days.
- **Electronic Monitoring of Pretrial Defendants** expanded from 50 to 100 units.
- **E-Courtrooms.** Superior Court opened eight new E-Courtrooms, which allow for swifter, fairer justice through technology. Lawyers will need less time to present cases and jurors will have better case understanding through enhanced evidence presentation.
- **Family Court Enhancement Project.** Navigator responds to all internet and family law inquiries and acts as Court Ombudsman. A Hearing Officer dedicated entirely to Domestic Violence cases reduces processing delays and increases response time.
- **Integrated Family/Juvenile Court.** In FY 2001, Superior Court implemented a pilot project with four divisions to share information between judicial officers who had parties with cases both in Family and Juvenile Court. Resulting in more informed judges and better decisions for all parties.
- **Jury Automation and Website.** New automation improves juror tracking, (qualification, service, and financial history). The Website now provides a juror with juror status, the ability to postpone jury service and select a new date for service.

Issue 1 **Effective Operations Management**

Summary

The Maricopa County Superior Court (SC) Administration effectively manages court operations in the areas of judicial procurement, judges' compensation, grants management and funds allocation, and jury revenue and expenditure cycles.

Areas Tested

Our office performed a thorough process review and executed detail transaction testing in the following SC areas:

- Adherence to the Judicial Procurement Code
- Accuracy of compensation for Court Judges
- Management of revenue streams related to grant and state allocation funds
- Jury Commission revenue cycle, and
- Jury Commission expenditure cycle

Testing Results

Our fieldwork and audit testing found:

- Contracts reviewed comply with the Judicial Procurement Code; controls have been established to effectively monitor contracts
- Court Judges are compensated accurately per ARS requirements; 50 percent by the County and 50 percent by the State.
- Revenue streams from state allocation funds are effectively managed.
- Controls over Jury Commission revenues are effective, and
- Appropriate controls have been established to monitor and administer Jury Commission expenditures.

Recommendations:

None, for information only.

Issue 2 Court Reporter Transcript Fees

Summary

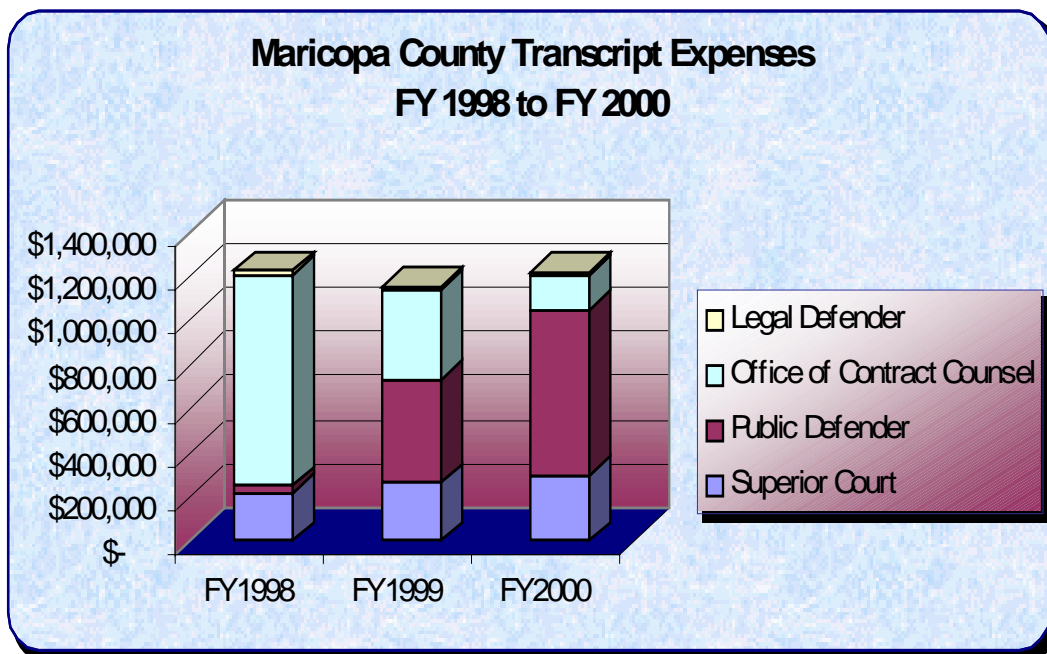
The County pays court reporters, including those employed by SC, approximately \$1.2 million per year for transcripts of courtroom proceedings. At least one SC court reporter's annual transcript income and salary exceeded \$100,000 and SC has paid over \$20,000 for a single transcript. Changes to ARS requirements related to transcripts could significantly reduce County costs. The County should seek legislative authority to make courtroom transcripts property of the County or appropriate court. SC should strengthen controls over the process for making personal transcript copies on court equipment.

Applicable Requirements

ARS 12-224 (B) sets fees court reporters can charge governmental entities for the production or delivery of written transcripts of courtroom proceedings. The fees are \$2.50 per original page and \$ 0.30 per copied page. SC Administrative Order 96-035 requires the SC copy center to charge three cents per copy for court reporter transcripts.

Financial Impact

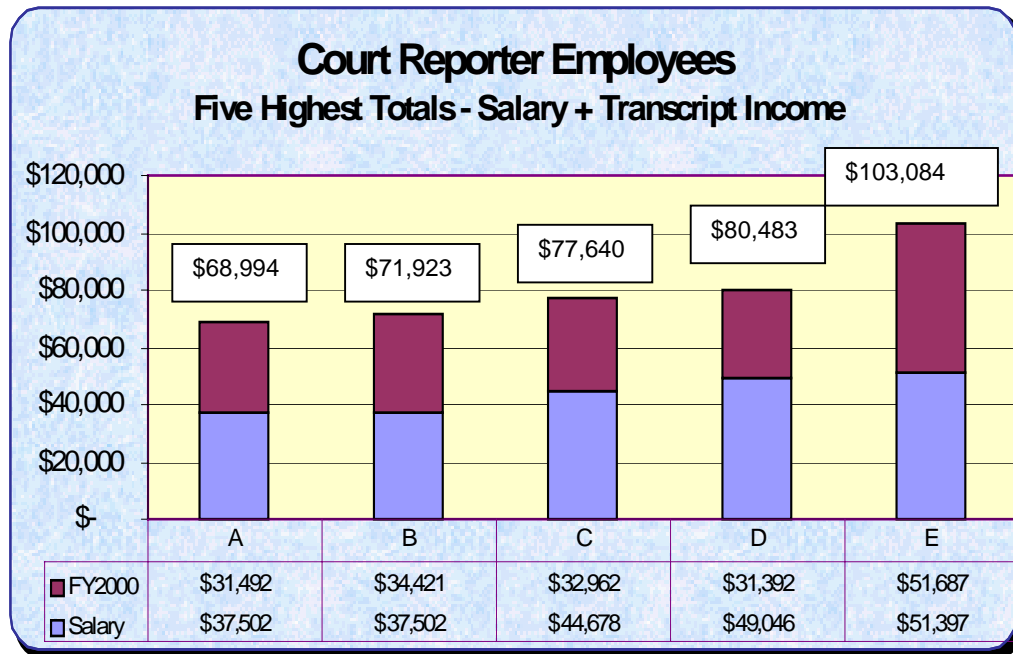
The County expends approximately \$1.2 million annually for courtroom transcripts. Although departmental expenses vary, overall transcript costs have remained relatively stable, as shown by the chart below. Totals for the fiscal years 1998 – 2000 are, \$1,227,546, \$1,157,232, and \$1,218,203, respectively.



Employee and Vendors

Court reporters who sell transcripts have both an employee and a vendor relationship with the County. Court reporters are paid between \$18 and \$25 per hour as a SC employee. Some also sell court transcripts back to SC or County departments for the statutorily set rate of \$2.50 per original page and \$.03 per copy.

Transcript income can sometimes boost court reporters annual County compensation to \$100,000 or more. The graph below shows the top five SC court reporters total FY 2000 compensation.



The practice of transcribing of court records (vendor work) during hours of employment further clouds the reporters' employee/vendor status. Court reporters interviewed report that they routinely work on transcripts during normal employee shifts when time allows.

Impact of Transcript Income on Court Reporters

Although SC court reporters are sometimes paid in excess of \$50,000 annually for transcripts, the FY 2000 average \$9,500 and 18 court reporters received no transcript income. Three of the top five compensated court reporters interviewed stated that in most years transcript income is not significant to their overall compensation.

Markup on Transcript Copies

The unbalanced nature of the current transcript process can be seen in the following situation. Court reporters routinely use the SC Copy Center to produce transcript copies. The court reporters are charged \$0.03 per page by SC and then sell the copies to the court or other County departments for \$0.30 per page. This difference represents an immediate 1,000 percent mark-up.

SC Copy Center records show that court reporters have not been billed for transcripts made at the center since May 1999. A review of SC Copy Center records from January – April 2001 shows 22,356 unbilled copies were made during the four-month period. Copy Center personnel report that one reason that amounts due are not collected is that court reporters refuse to pay.

Court Reporter Alternatives

Many state and county level court systems, throughout the United States, have adopted alternative methods for recording courtroom proceedings. Progressive methods include audio taping, video taping, and computer assisted transcription (CAT). CAT uses computer technology to immediately translate a court reporter's shorthand into English. SC is currently pursuing electronic recording of courtroom proceedings in a limited number of courtrooms.

All electronic recording methods have both advantages and disadvantages when compared to the traditional court reporter function. However, a benefit common to all methods is the elimination of transcript related expenses.

Recommendation

SC should:

- A. Continue to pursue and evaluate the benefits of alternate methods of recording courtroom proceedings
- B. Seek legislative initiatives to eliminate transcript charges of \$2.50 per original page and \$0.30 per copied page
- C. Collect amounts owed by SC court reporters for personal copies and discontinue the practice of using County copiers for personal use.

Issue 3 Donation of Juror Fees

Summary

SC paid Superior Court jurors \$1,971,412 in FY 2000 for mileage reimbursement and daily fees. Benchmarking with other counties indicates that up to 36% of jurors will donate their fees back to their County if given the opportunity. A County Jury Donation Program could generate as much as \$700,000 each year for the General Fund or other Special Revenue Fund. The SC Jury Commission should initiate a Board of Supervisors agenda item calling for the creation of a Maricopa County Jury Donation Program, as soon as possible.

Applicable Requirements

ARS 21-221 establishes the rights for jurors to receive fees for service and transportation reimbursement expenses. Jurors currently receive \$12 per day for serving on a jury panel and are also reimbursed for transportation costs.

County Counsel has interpreted ARS requirements and found that establishing a Juror Donation Program would require no legislative change and could be created through a Board of Supervisors resolution.

Benchmarking Results

We surveyed several US counties and found that Juror Donation programs have been in use for as long as 15 years. Some jurisdictions employing a Juror Donation program do not have statistics readily available. However, the following table displays relevant information that was obtained from seven urban counties.

COUNTY NAME	POPULATION	PROGRAM EFFECTIVE DATE	FEES PAID	DONATIONS	PERCENT
Orange, CA	2,846,289	10/98	\$681,574	\$34,079	5.0%
Ada, ID	300,904	1/94	\$115,958	\$14,278	12.3%
Washoe, NV	399,486	1/93	\$128,980	\$13,235	10.3%
Hamilton, OH	845,303	1/91	\$229,051	\$60,718	26.5%
Allegheny, PA	1,281,666	6/95	\$765,328	\$33,380	4.4%
Dallas, TX	2,218,899	10/89	\$900,534	\$324,264	36.0%
Fairfax, VA	969,749	10/93	\$457,710	\$25,336	5.5%

Donations vary from 4.4 percent to 36 percent of juror fees and the average of the seven reporting counties is 14.2 percent. Older, more established programs appear to more successfully generate donations. If the County could generate the average of the surveyed counties, the County would gain \$279, 940 for use in the General Fund or other fund. If the 36 percent donation rate (Dallas County, Texas) were achieved, \$709,708 would be made available.

Donation Recipients

The beneficiaries of the donated juror fees varied widely between jurisdictions. Some of the entities listed as donation recipients are:

- The United Way
- Courtroom childcare facilities
- Various children's charities
- Jury improvement funds
- Counties' General Fund.

Reduced Administrative Costs

Juror fee donations reduce the number of jury warrants that must be generated and mailed each week. The Jury Commission generates over 100,000 total warrants annually. While total administrative savings have not been estimated, the reduction in the number of warrants would save, at a minimum, \$0.28 postage cost per letter. For example, a reduction of 20,000 warrants per year would reduce SC expenses by a minimum of \$5,600.

Furthermore, the survey found that the costs for administering the juror donation programs are minimal. Jurors generally declare their donation intentions on paperwork already in use in the jury process. This procedure both encourages the juror to donate their fees and facilitates the court's administrative process.

Recommendation

SC should initiate a Board of Supervisors agenda item calling for the creation of a Maricopa County Jury Donation Program.

Issue 4 Increased Revenue – Municipal Jury Summons

Summary

The SC Jury Commission provides jury summons services to local municipalities for a fee. Under the terms of IGAs first executed in FY 1995, cities reimburse the County on a cost-per-summons basis of one dollar. SC records show actual costs since FY 1995 have ranged from \$1.17 to \$1.31 per summons. If cities are billed for actual costs, County revenue should increase by \$40,000 to \$70,000 annually. In the future, the SC Jury Commission should bill cities for full actual costs.

Applicable Requirements

The SC Jury Commission provides service to the cities of Phoenix, Tempe, Mesa, Glendale, Chandler, and Scottsdale under IGAs that are renewed on an annual basis. Current IGAs are in force through June 2002.

Reimbursement of Costs

Since FY 1995, IGAs require local cities to reimburse the County for costs incurred to mail summonses to the cities' prospective jurors. Section (5) of the IGAs stipulates that the SC can negotiate a fee increase if its costs increase.

Since the IGAs were approved in FY 1995, the cities have been billed at one dollar per summons. SC financial spreadsheets show that costs per summons was \$1.31 in FY 1995 and \$1.17 in FY 2000. SC did not calculate cost estimates for FY 1997 through FY 1999.

The IGAs also authorizes the County to charge cities an annual set up fee (\$1,000 and \$5,000) for programming and computer time. No cost estimates are available to support the billed amounts.

New Jury Computer System

The SC Jury Commission is currently implementing a new Windows-based jury system. The court indicates the system has several improved features that will translate into enhanced benefits and better service for jurors as well as for valley cities. The new system may also change the cost structure for the set up and delivery of juror summonses.

Implementation of a new computer system, with enhanced services for SC customers, will be a strong selling point in negotiating a pricing increase in the next round of IGAs with valley cities.

Recommendation

SC should:

- A. Calculate new set up and processing costs for delivering juror summonses based on the new Windows-based juror system
- B. Negotiate full cost reimbursement for both set up and delivery of municipal juror summonses for the IGA agreements beginning in FY 2002.

Issue 5 Stale Dated Jury Warrants

Summary

Approximately \$150,000 of Miscellaneous Revenue can be immediately transferred for use in the General Fund from Fund 714 – Jury Payroll Clearing. Per A.R.S. 11-644 A-C, County warrants not presented for payment for one year are deemed to have been paid. These monies can then be transferred to the General Fund. Stale-dated jury warrants have not been transferred from Fund 714 to the General Fund since the inception of the law in September 1996. Transfer of these funds would increase the General Fund balance by over \$150,000. The Department of Finance (DOF) should reconcile Fund 714 and transfer appropriate balances to the General Fund.

Statutory Requirements

A.R.S.ARS 11-644 (A– C) state that a warrant, drawn on the County’s General Fund and not presented for payment for one year is deemed to have been paid. The monies represented by the warrant can then be transferred for use in the County’s General Fund, or other appropriate fund.

Jury Payroll Clearing Fund

Fund 714 (Jury Payroll Clearing) is a clearing fund used for all warrants drawn to pay jurors for mileage reimbursement and \$12 daily fees. Monies are cleared out of Fund 714 when jurors present the warrants for payment.

The SC Jury Commission issues over 100,000 warrants annually to jurors within the County. Since FY 1996, over 14,000 warrants were not presented for payment within one year and are considered stale-dated. Many warrants are returned in the mail and others are simply not cashed.

A listing of stale-dated warrants is sent monthly by the Treasurer to DOF to properly account for reissued warrants. An accounting entry should be made at that time to transfer the amounts of the warrants from Fund # 714 to the General Fund (Fund 100).

Since ARS 11-644 became effective in September 1996, the transfer has not been performed. The result is an increasing balance in Fund 714. Periodic transfer of the funds to the General Fund would increase the General Fund balance and make additional monies available to the County.

Required Notification

A.R.S. 11-644 also requires the County to notify payees that the check or warrant is void. Notice for warrants less than \$50 may be made by first class mail and notice for warrants of \$50 or more must be made by certified mail.

Currently the County provides no notice to payees of stale dated jury warrants. One reason for this omission is that many jury warrants are for very small amounts and the County's cost to generate the required notice would exceed the amount of the warrant itself.

Recommendation

DOF should:

- A. Immediately transfer amounts represented by stale-dated warrants from September 1996 through the present out of Fund 714 into the General Fund
- B. Initiate procedures to transfer stale-dated warrants from Fund 714 into the General Fund on a monthly basis.

In addition, the Jury Commission should:

- C. Consider seeking a legislative change to eliminate the notification requirement for small-dollar warrants
- D. Comply with current notification requirements.

Issue 6 Information Technology Management

Summary

Judicial Information Services (JIS) has formed an Information Technology (IT) Steering Committee and is developing a Project Management Methodology document. However, the Steering Committee has not met to discuss the JIS project plan for moving its existing Automated Court System (ACS) application from the mainframe environment to a web-enabled NT environment. An IT Steering Committee will help provide project direction and prioritization, lessening the risk of cost overruns and inefficiencies. JIS' IT Steering Committee should review and approve all IT project plans and JIS should complete its Project Management Methodology document.

IT Best Practices

Industry best practices suggest that an organization's IT Steering Committee should be consulted prior to beginning any major IT projects. An IT Steering Committee is responsible for setting strategic direction for information technology to ensure current business goals are supported in a cost effective and efficient manner. County policy requires the use of a project management methodology in conjunction with an application of project management capabilities to accomplish the planning, implementation, and tracking of all Information Systems projects.

JIS' recently formed an IT Steering Committee but has not met to provide input as to the direction of IT projects or activities. JIS is currently in the process of migrating the ACS application from the existing mainframe environment to a web-enabled NT environment. In addition, JIS has not yet completed the planned Project Management Methodology document or the forms for user management to approve the work performed.

Lack of proper project management through an IT Steering Committee and through inadequate management approval of current projects may result in either a system that does not meet user needs, is inefficient, and vastly over-budget.

Recommendation

JIS should:

- A. Present the JIS migration plan to the IT Steering Committee so the committee can review and approve the plan, taking into consideration other pending IT projects.
- B. Complete documentation of a JIS Project Management Methodology and the related management sign-off forms for use in the JIS project currently underway.

Issue 7 Security Weaknesses

Summary

Several control weaknesses were identified relating to security administration within JIS. Security administration establishes a framework for protecting information and information technology systems by assuring operation continuity, integrity, and confidentiality. Without adequate security administration, systems may be compromised. JIS should strengthen its security administration controls.

County Policy

County Policy A1605 states that “each elected official and appointed department director shall establish security controls and practices sufficient to ensure that confidentiality (to the extent required by the law), integrity, availability, and appropriate use of all electronic data and information assets will be maintained for information systems.” In addition, “each elected official and appointed department director shall create and adopt a departmental security policy (including provisions for appropriate use) for information, information systems, and for the transmission of information.”

Security Weaknesses

During our review we noted the following security weaknesses:

- JIS does not have formal (written) security policies and procedures in place which increases the risk that employees may gain unauthorized or improper network or application access.
- JIS has no central point of contact for security administration (i.e. a security officer or the equivalent). Access to JIS systems are administered by various individuals. IT best practices suggest that having an employee who is designated Security Officer helps to mitigate the risk of inconsistent application of security policies throughout the organization.
- There appears to be an excessive number of users with access to critical ACS functions. Due to the large number of users with access to Case Initiation, Update Parties, and Docket Events, an unnecessary risk is taken that unauthorized or erroneous activity occurs within the ACS system.
- JIS network sign-on passwords do not expire. IT best practices suggest that password parameters for critical operating systems force password changes every 30 to 90 days with no duplicating passwords for three generations and require a minimum password length of six characters.
- JIS has no procedures in place for periodic review of user access to ACS, JURY, and the GCOS operating system. Furthermore, JIS is only notified one time per month of terminated employees with the exception of “emergency” cases (i.e. compulsory

termination initiated by the County). Without adequate notification and regular reviews, users may have excessive or unnecessary levels of system access based on their current positions or employment status.

- JIS prints a large number of warrants (checks) each week for payments to jurors for duty served. While there are controls in place, these controls are not formally documented.

Recommendations

In an effort to strengthen the above-discussed weaknesses and ensure compliance with County Policy A1605, JIS should:

- A. Document security policies and procedures for administering access to the network and applications.
- B. Work with the Superior Court to appoint a Security Officer to ensure that security administration policies and procedures are applied consistently throughout the organization.
- C. Conduct a formal review of user access to the operating system and the JURY and ACS applications periodically (at least annually). JIS should also work with the Superior Court to establish a formal procedure for Human Resources to notify JIS upon termination of any employee.
- D. Review user access rights to the critical functions of the ACS application to ensure that users have not been granted unnecessary or excessive levels of access. Such a review can help mitigate the risks associated with unauthorized or erroneous changes in ACS data.
- E. Change the network sign-on password parameters such that passwords expire every 30 to 90 days with no duplicate passwords for three generations and require a minimum password length of six characters.
- F. Develop and implement a formal procedure for warrant printing and distribution.

Issue 8 Operating Systems Weaknesses

Summary

The Bull mainframe logical security settings include parameters that are not considered best practice. Additionally, a formalized (written) procedure has not been developed for approval and testing of new operating systems, operating system upgrades, or operating system patches. JIS should implement proper controls to reduce the risk that the integrity of the information processed on the department's systems will be compromised.

IT Best Practices

Inherent weaknesses in Bull mainframe computer's password parameters, combined with JIS policies that do not support best practice logical security settings for the mainframe, increase the risk that the integrity of information processed will be compromised. In addition, IT best practices suggest that organizations should have formal (written) procedures for all IT change control processes. Establishing controls over the system software change process can help to ensure only authorized changes and modifications are implemented.

The Bull mainframe logical security settings include parameters that are not considered best practice. Although the mainframe does have powerful logging capabilities, users can disable these capabilities even without security administrator access levels. Also, JIS has not developed written procedures for approval and testing of new operating systems, operating system upgrades, or operating system patches. This weakness increases the risk that approval and testing of these changes may not be performed in accordance with management's expectations.

Recommendation

JIS should:

- A. Implement best practice logical security controls for the mainframe operating system.
- B. Create a formal (written) policy for the approval and testing of new operating systems, operating system upgrades, and operating system patches.

Issue 9 Segregation of Duties

Summary

Application developers have access to the production environment, which increases the risk of improper and undocumented changes to JIS systems. Inadequately segregated duties increase the risk that erroneous or fraudulent transactions may be processed or that improper program changes can be implemented. JIS should remove or strictly limit developer access to JIS production environments.

Segregation of Duties

The United States General Accounting Office's (GAO) *Federal Information System Controls Audit Manual (FISCAM)* explains that "establishing controls over the modification of application software programs helps to ensure that only authorized programs and authorized modifications are implemented. Work responsibilities should be segregated so that one individual does not control all critical stages of a process. Often segregation of duties is achieved by splitting responsibilities between two or more employees."

Currently, JIS developers are making "hot fixes" (quick fixes made that by-pass normal operating controls) to the production environment. Lack of adequate segregation controls may result in developers making improper and undocumented changes which could be damaging to JIS systems and violate the integrity of the data.

Recommendation

JIS should remove or strictly limit developer access to the production environments. All changes to these applications should be subject to a change control process, or at a minimum, should be carefully documented. Such a control would help to mitigate the risk associated with improper or undocumented changes being made to the production environment.

Issue 10 Business Continuity

Summary

JIS has not developed a formal disaster recovery plan. Additionally, the data center sprinkler system is not dry-charged and backup tapes stored on-site and not protected from water damage. JIS does not have assurance that systems can be recovered in a timely manner, in the event of a fire or disaster, and may experience business interruption. JIS should develop a formal disaster recovery plan and consider alternatives for its current fire extinguishing system.

IT Best Practices

IT best practices suggest that an organization should have a formal Disaster Recovery Plan (DRP) in place that allows for the recovery of critical processing capabilities within a reasonable period of time. JIS has not developed and implemented a formal disaster recovery plan. Additionally, IT best practices suggest that data center sprinkler systems should be dry charged (water is pushed back in the system so it is not present at the sprinkler head) or utilize a dry fire-retardant chemical, in order to avoid accidental damage to servers and/or backup tapes kept on-site.

Business Interruption

JIS does not have a formal disaster recovery plan in place that allows for recovery of critical processing capabilities within a reasonable period of time. In addition, the data center sprinkler system is not dry-charged and back-up tapes are not protected from potential water damage. If a data center disaster were to occur, the critical processing capabilities of the organization might be unavailable for an extended period of time causing business interruption.

Recommendation

JIS should:

- A. Establish a formal disaster recovery plan (DRP) which provides for the recovery of critical processing capabilities within a reasonable period of time following a data center disaster. The DRP should be maintained offsite and should be tested at least once annually for effectiveness and to ensure that the plan is kept up to date.
- B. Consider alternatives to the current fire extinguishing system and protect on-site backup tapes from water damage.

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DEPARTMENT RESPONSE